

**Remarks:**

*Indication of Support for “Relative” Motion Claim Amendments:* Support for claim amendments regarding “relative” motion (in its variant forms), may be found in text starting at page 19, line 30 to page 20, line 4.

*Remarks regarding Substantive Concerns:* The Office, in an April 14, 2010 office action, expressed concern as to claims remaining in the case under 35 USC §103 as based on US Pub. No. 2003/0029087 (the publication of US Pat. Application no. 10/167,693) alone, and US Pub. No. 2003/0029087 as combined with US Pat. No. 5,911,631 (hereinafter referred to as Bouldin).

The Assignee also notes that US Pub. No. 2003/0029087 is the publication of US Pat. Application no. 10/167,693. The priority claim as amended herein (which is identical to the priority claim correction submitted as part of the Petition under 37 CFR §1.78(a)(3)) makes reference to the US Pat. Application no. 10/167,693. As such, the Assignee expects that such priority claim, upon granting, will eliminate US Pub. No. 2003/0029087 as a reference.

The Assignee would also note that the priority claim, as corrected in 37 CFR §1.78(a)(3), also references US Pat. App. No. 10/470,282 (US Pub. No. 2004/0079263), a US national phase application of PCT/US02/02257 (Pub. No. WO02/058455). Assignee makes this indication because both said publications (US Pub. No. 2004/0079263 and WO02/058455) include disclosure that is identical, or at least very similar, to the disclosure in US Pub. No. 2003/0029087 (in particular, Fig. 26A-26C) that prompted the Office’s reliance on US Pub. No. 2003/0029087 in each of its rejections.

More particularly, the Office advanced two separate rejections - both under 35 USC §103 - in the April 2010 office action. Both rejections relied on US Pub. No. 2003/0029087; one exclusively, and the second in combination with US 5,911,631 (hereinafter referred to as Bouldin). Again, as the Petition Under 37 CFR §1.78(a)(3) is expected to remove US Pub. No. 2003/0029087, the Assignee expects that both said obviousness rejections are overcome

and will be withdrawn. Further, the Assignee indicates that the Petition also corrects the priority claim to cite those applications - US Pat. App. No. 10/470,282 (US Pub. No. 2004/0079263), a US national phase application of PCT/US02/02257 (Pub. No. WO02/058455) - having disclosure that is identical, or at least very similar, to the disclosure in US Pub. No. 2003/0029087 (in particular, Fig. 26A-26C) that prompted the Office's reliance on US Pub. No. 2003/0029087 in each of its rejections. As such, merely in an effort to expedite prosecution, the Assignee would submit that any concerns expressed by the Office based on said applications (or publications thereof, or patents issuing therefrom), would be inappropriate.

While the two obviousness rejections should be withdrawn because they each depend on a reference (US Pub. No. 2003/0029087) that Assignee expects the aforementioned Petition should remove, the Assignee would take this opportunity to explain that the Bouldin reference, while relating to transplanting, does not disclose downward punching as now claimed. Pins in Bouldin first dislodge plants from their germination tray using an upward motion; such pins never move horizontally. Any horizontal motion disclosed by the Bouldin reference is not of the component in Bouldin that effects such dislodging of the plant from its "first" tray but is, instead, of the grippers that subsequently (after the plant is dislodged from its first tray) grasp the plant, move horizontally, and then insert it into the secondary tray using a vertical motion.

Further, claim 1 now also makes clear that the "plant punch element relative movement mechanism relatively moves said first plant punch element through said first spatial point and then said second spatial point before said plant punch event". However, any horizontal motion disclosed by the Bouldin reference occurs *after* its plants are dislodged from their germination tray (which again, requires an upwards motion in Bouldin).

One preferred embodiment of our apparatus is described by claim 11, as amended, which says that the "first plant punch element relative travel path passes below said plant emergent point horizontal plane at least by that amount necessary to transplant said first plant into a container established below said plant emergent point horizontal plane." Bouldin's

secondary tray is not under the tray from which the plant is first removed (of course, that would make no sense, as Bouldin dislodges using an upwards motion).

Further, in order for Bouldin to transfer the dislodged plant into a new container (i.e., from the germination tray to the secondary tray), it must go through a much more complicated movement, one involving grippers that must be spread (see Fig. 9 of Bouldin as compared to its Fig. 8), and, also, manipulation of gripper fingers during plant grasping from the germination tray insertion into the secondary tray. In sum, Bouldin describes a very different transplanter.

Advantages, and support for the patentability of the pending claims as amended, can also be found in the attached affidavit (see Exhibit A) by Randall Tagawa (a co-inventor). Exhibit B includes two letters from Ball Seed, a user of the “shifter” apparatus. Both Exhibits are incorporated herein as part of this reply.

*Additional Remarks:* Preliminary amendments to limit the examination effort required for the claims have been made to submit certain embodiments of the present invention for examination in this initial application. The amendments are believed to be consistent with the disclosure originally filed. The amendments have been particularly presented to avoid, where applicable, any admission or estoppel, generally, negatively effecting the scope of protection provided by the disclosure and claims of the present application, and particularly to avoid any right to pursue any claims in any subsequent application, any prosecution history estoppel, any limitation of the scope of equivalences, or the like.

It should be understood that the amendments submitted herein are made as a matter of practicality only, and should not to be construed as creating any situation of file wrapper estoppel or the like as all rights are expressly reserved and may be pursued in this or other applications, such as divisionals, continuations, or continuations-in-part if desired. Amendments are made for tangential issues of clarity and as a matter of the Office's convenience or expedience only. The amendments should not be interpreted as an action that in any way surrenders a particular equivalency, surrenders any right to patent coverage, or

otherwise limits any rights that the Applicant may now or hereafter assert. It should be understood that, unless and to the extent deemed broadened by this amendment, and even as amended, the Applicant expressly reserves all rights, including but not limited to: all rights to maintain the scope of literal coverage with respect to any element as may have existed under the language previously presented, all rights to maintain the scope of equivalency coverage as may have existed under the language previously presented, and all rights to re-present the prior language at any time in this or any subsequent application. To the extent currently foreseeable, no change or reduction in *direct or* equivalency coverage is believed to exist, and no change or reduction in *direct or* equivalency coverage is intended through the presentation of this amendment.

**Conclusion:**

The Assignee requests that the Office amend the specification and claims as indicated herein and reconsider the application. It is believed that all claims are in condition for allowance; an allowance of all claims is requested at the examiner's earliest convenience after the Office of Petitions has ruled on the Petition under 37 CFR §1.78(a)(3).

Dated this 14<sup>th</sup> day of September, 2010.

Respectfully submitted,

/Alfred K. Wiedmann Jr./  
Alfred K. Wiedmann, Jr.,  
USPTO Reg. No. 48,033  
Attorney for Assignee  
125 South Howes, Third Floor  
Fort Collins, Colorado 80521  
(970) 224-3100